



The Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office, (IRO) - Ranchi
2nd floor, Headquarter, Jharkhand State Housing Board Harmu Chowk,
Harmu Housing Colony, Argora, Jharkhand - 834002.

Ref No. - JMB/ENV/LMSL/60/ 296 /2024
May 27th, 2024

Ref.: Environmental Clearance letter No.-J-11015/426/2008-IA.II(M),Dated-27th February,2013.

SUB: Half Yearly Compliance Status Report of Environment Clearance conditions issued by MoEFCC, New Delhi to Lagla Mahal Sand Lease, Tata Steel Limited, Dhanbad for the period October-23 to March-24.

Dear Sir,

We are enclosing herewith compliance report for the period **October-23 to March-24** for the EC granted vide letter no.- J-11015/426/2008-IA.II (M), Dated-27th February,2013 issued by Ministry of Environment, Forest and Climate Change, New Delhi.

We trust the information furnished is in line with your requirement.

Thanking you,

Yours faithfully,

Head (Planning)
Jharia Division, Tata Steel Ltd.

Encl: As above.

Copy to: Member Secretary, CPCB, Eastern Zonal Office, Southend Conclave, 502, 5th Floor
1582, Rajdanga Main Road, Kolkata -700107.

Copy to: Member Secretary, JSPCB, T.A. Division Building (Ground Floor), H.E.C, Dhurwa,
Ranchi - 834004.

Copy to: Regional Officer, JSPCB, HIG -1 Sardar Patel Nagar, Housing Colony, Hirapur,
Dhanbad

TATA STEEL LIMITED

Jharia Collieries Jamadoba 828 112 Dhanbad India

Tel 91 326 2320263/2320265/2320267 Fax 91 326 2320268

Regd. Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Your (**Environment Clearance**) application has been **Submitted** with following details

Proposal No	IA/JH/MIN/20492/2011
Compliance ID	27334315
Compliance Number(For Tracking)	EC/M/COMPLIANCE/27334315/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	30-05-2024
IRO Name	ARTATRANA MISHRA
IRO Email	jhk109@ifs.nic.in
State	JHARKHAND
IRO Office Address	Integrated Regional Offices, Ranchi

Note:- SMS and E-Mail has been sent to ARTATRANA MISHRA, JHARKHAND with Notification to Project Proponent.

**Half Yearly Compliance Report
2024
01 Jun(01 Oct - 31 Mar)**

Acknowledgment

Proposal Name		Lagla and Mahal Sand Lease Mining Project of M/s. Tata Steel Ltd., located in Village Lagla and Mahal, Dist. Bokaro, Jharkhand	
Name of Entity / Corporate Office		Tata Steel Ltd.	
Village(s)		N/A	
District		BOKARO	
Proposal No.	IA/JH/MIN/20492/2011	Category	Non-Coal Mining
Plot / Survey / Khasra No.	N/A	Sub-District	N/A
State	JHARKHAND	Entity's PAN	NA
MoEF File No.	J-11015/426/2008-IA.II(M)	Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year	2024
Remarks (if any)	Half Yearly Compliance Submission for October 2023 to March 2024.
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office Tata Steel Ltd.

	Project Area as per EC Granted	Annual Project Area in Possession
Private	0	0
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	0	0

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Sand	Million Tons per Annum (MTPA)	N/A	0.1	0	

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	The project proponent shall comply with section 3 of the Mines Act.
PPs Submission: Complied It is being complied.		Date: 29/11/2023
2	Statutory compliance	The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board, and effectively implement all the conditions stipulated therein.
PPs Submission: Complied The Consent to Establish has been granted by JSPCB vide letter no. JSPCB/RO/DHN/CTO-9357577/2021/35 dated 25.03.2021. The current CTO is valid till 31.03.2026. All the conditions as stipulated in the consent are being complied with.		Date: 29/11/2023
3	AIR QUALITY MONITORING AND PRESERVATION	Particulate level (PM2.5) shall be monitored regularly and the result placed in the public domain.
PPs Submission: Complied Monitoring of PM2.5 has been carried out in this period. The report is given as Annexure-I.		Date: 30/05/2024
4	MISCELLANEOUS	Sand collection shall be done at the middle/ main stream and not at the bank of the river to avoid any change of the river course due to the project.
PPs Submission: Complied Sand excavation is done by leaving 1/5th of the width of the river intact for maintaining the embankment. It will be ensured that no change in the river course takes place.		Date: 29/11/2023
5	GREENBELT	The project proponent shall identify the degraded area within the mine lease and undertake plantation/afforestation in the area identified by planting the native species.
PPs Submission: Complied The mine lease area is a riverbed. Hence, we approach the villagers and assist them in planting the native species as well as fruit plants in the villages. Some of the native species are Pipal, Ber, Jamun, Alostromia, Palash, Karanj, Kadamb etc.		Date: 29/05/2024
6	AIR QUALITY MONITORING AND PRESERVATION	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out of haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
PPs Submission: Complied It is being complied. Water spraying is done on the transportation roads on regular basis. The ambient air quality is regularly monitored and analyses by own as well as by NABL and JSPCB recognized lab and conform to the prescribed standards. Reports are enclosed as Annexure-I.		Date: 29/05/2024

7	Statutory compliance	The project proponent shall undertake adequate safeguard measures during extraction of river bed material and ensure that due to this activity the hydrogeological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area by establishing a network of existing well and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
PPs Submission: Complied The extraction of sand is done with utmost care of the environment. There is no extraction of water as well as no change in river course involved hence there will be no impact on the hydrogeological regime. The monitoring report of the ground water level and quality is given as Annexure-I.		Date: 29/05/2024
8	WATER QUALITY MONITORING AND PRESERVATION	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite of water (surface water and groundwater), if any, required for the project.
PPs Submission: Complied No water is required for the operation of project. Drinking water required by the workers is arranged by the company.		Date: 29/05/2024
9	MISCELLANEOUS	Appropriate mitigative measures shall be taken to prevent pollution of the river in consultation with the State Pollution Control Board. It shall be ensured that there is no leakage of oil and grease in the river from the vehicles used for transportation.
PPs Submission: Complied Adequate monitoring of the health of the vehicles used for transportation of sand is ensured to avoid any oil & grease leakage. Higher capacity trucks have been deployed. Without valid fitness certificates and PUC, the vehicles are not allowed to ply, and it is regularly checked.		Date: 29/05/2024
10	AIR QUALITY MONITORING AND PRESERVATION	Vehicular emissions shall be kept under control and regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
PPs Submission: Complied The vehicles used are regularly checked and maintained. Only vehicles having PUC certificates are allowed. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded. This is monitored whenever vehicles enter premises at weighbridge		Date: 29/05/2024
11	AIR QUALITY MONITORING AND PRESERVATION	No drilling and blasting operation shall be carried out.
PPs Submission: Complied Not applicable as it is a sand mining project.		Date: 29/05/2024
12	AIR QUALITY MONITORING AND PRESERVATION	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading

	PRESERVATION	areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
PPs Submission: Complied Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. Sand stored in the sand yards is transferred to underground voids through surface bunkers in a slurry form. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.		Date: 29/05/2024
13	Human Health Environment	Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
PPs Submission: Complied As per our policy, PME's (Periodical Medical Examination) are conducted at regular intervals.		Date: 29/05/2024
14	Human Health Environment	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
PPs Submission: Complied The workers are from the neighboring villages and hence new housing facilities are not required.		Date: 29/05/2024
15	Statutory compliance	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH, Fecal Coliform and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
PPs Submission: Complied The monitoring of the air parameters has been done in this period. There is no use of water for mining operation hence there is no discharge. Details of air quality monitoring are given in Annexure-I. The monitoring reports are regularly uploaded on company's website along with half-yearly EC compliance reports.		Date: 29/05/2024
16	MISCELLANEOUS	The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.
PPs Submission: Complied		Date:

The Company already has an Environment Policy approved by the Managing Director and it addresses all the issues mentioned. The status of adherence to the policy and compliance to Environmental laws and regulations is regularly discussed at higher levels. Any non-compliance noticed is corrected at divisional level. If any issue is beyond our control, it is brought to the notice of higher management. The environment management cell directly reports to General Manager and it is reviewed on weekly basis. We have an online system to monitor the statutory requirements and compliance in time. This is reviewed by Board of Directors at company's level.

29/05/2024

General Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	No change in the calendar plan including excavation, quantum of sand from river bed and waste should be made.
PPs Submission: Complied It is being complied with.		Date: 29/05/2024
2	Statutory compliance	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.
PPs Submission: Complied It is being complied with.		Date: 29/05/2024
3	MISCELLANEOUS	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.
PPs Submission: Complied No rare species are found in the area.		Date: 29/05/2024
4	AIR QUALITY MONITORING AND PRESERVATION	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
PPs Submission: Complied The monitoring stations have been established and monitoring jobs are being performed regularly. The ambient air quality analysis reports are attached as Annexure-I.		Date: 29/05/2024
5	AIR QUALITY MONITORING AND PRESERVATION	Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM10) and NOx)] should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months.
PPs Submission: Complied It is being submitted as Annexure-I in this compliance report.		Date: 29/05/2024
6	AIR QUALITY MONITORING AND PRESERVATION	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly

		maintained.
PPs Submission: Complied Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.		Date: 29/05/2024
7	Noise Monitoring & Prevention	Measures should be taken for control of noise levels below 85 dBA in work Environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
PPs Submission: Complied Proper PPE's are provided to all the workers.		Date: 29/05/2024
8	WATER QUALITY MONITORING AND PRESERVATION	Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.
PPs Submission: Complied No waste water generation will take place.		Date: 29/05/2024
9	Human Health Environment	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures, if needed.
PPs Submission: Complied It is being complied during operating hours.		Date: 29/05/2024
10	MISCELLANEOUS	A separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a senior executive, who will report directly to the Head of the Organization.
PPs Submission: Complied We have a separate Environmental Management Cell with qualified personnel's. The reporting of Environmental Cell is directly to General Manager of the Division.		Date: 29/05/2024
11	MISCELLANEOUS	The funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.
PPs Submission: Complied Expenditure on Environmental Protection measures is monitored separately. It is provided in the Environment Statement every year. The annual expenditure for the financial year 2022-23 is Rs. 0.39 lakhs for water spraying activities on transport road, plantation and environment monitoring.		Date: 29/05/2024
12	MISCELLANEOUS	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
PPs Submission: Complied The CTE and CTO of the project have been granted by JSPCB. The permission for lifting of sand		Date:

from the river bed has also been granted by District Mining Officer, Bokaro.		29/05/2024
13	MISCELLANEOUS	The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the regional office by furnishing the requisite Data/ information/ monitoring reports.
PPs Submission: Complied It will be complied with.		Date: 29/05/2024
14	Statutory compliance	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environment clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the MoEF, its Regional Office Bhubaneswar, the respective zonal office of CPCB and the SPCB. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, Bhubaneswar, the respective Zonal Officer of CPCB and the SPCB.
PPs Submission: Complied It is being complied with. We are uploading the compliance of October 2023-March 2024 HY Compliance on PARIVESH Portal.		Date: 30/05/2024
15	Statutory compliance	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
PPs Submission: Complied It has been complied with.		Date: 29/05/2024
16	Statutory compliance	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's Office / Tehsildar's Office for 30 days.
PPs Submission: Complied The copy of clearance letter has been sent to JSPCB office and its compliance report is also submitted to JSPCB.		Date: 29/05/2024
17	Statutory compliance	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also be sent to the respective Regional Office of the Ministry on Environment and Forests, Bhubaneswar by e-mail.
PPs Submission: Complied The environmental statement for financial year 2022-23 has been submitted to JSPCB on 29th September 2023 vide letter no. JMB/ENV/ESSA/05/730/2023 and it is also uploaded on the company website. The soft copy of Environment Statement is also sent to MOEF by email at		Date: 29/05/2024

ro.ranchi-mef@gov.in.		
PPs Submission: Complied The environmental statement for financial year 2022-23 has been submitted to JSPCB on 29th September 2023 vide letter no. JMB/ENV/ESSA/05/730/2023 and it is also uploaded on the company website. The soft copy of Environment Statement is also sent to MOEF by email at ro.ranchi-mef@gov.in.		Date: 29/05/2024
18	Statutory compliance	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.
PPs Submission: Complied It has been complied with.		Date: 29/05/2024
Visit Remarks		
Last Site Visit Report Date:		N/A
Additional Remarks:		

HALF YEARLY COMPLIANCE REPORT

(PERIOD: OCTOBER'23 – MARCH'24)

LAGLA MAHAL SAND LEASE
(CAPACITY: 0.1 MTPA RIVER BED SAND)
VILLAGE: LAGLA & MAHAL, DIST: BOKARO,
JHARKHAND



TATA STEEL LIMITED, JHARIA DIVISION
P.O.- JAMADOBA, DIST. - DHANBAD,
STATE- JHARKHAND, PIN CODE – 828112

**ENVIRONMENTAL CLEARANCE GRANTED VIDE LETTER NO. - J-
11015/426/2008-IA.II(M) DATED- 27.02.2013 ISSUED BY GOVT. OF INDIA,
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW
DELHI.**

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

S. No.	Condition	Compliance Status
Specific Condition		
(i)	The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board, and effectively implement all the conditions stipulated therein.	The Consent to Establish has been granted by JSPCB vide letter no. JSPCB/RO/DHN/CTO-9357577/2021/35 dated 25.03.2021. The current CTO is valid till 31.03.2026. All the conditions as stipulated in the consent are being complied with.
(ii)	The project proponent shall comply with section 3 of the Mines Act.	It is being complied.
(iii)	Sand collection shall be done at the middle/ main stream and not at the bank of the river to avoid any change of the river course due to the project.	Sand excavation is done by leaving 1/5th of the width of the river intact for maintaining the embankment. It will be ensured that no change in the river course takes place.
(iv)	Particulate level (PM2.5) shall be monitored regularly and the result placed in the public domain.	Monitoring of PM2.5 has been carried out in this period. The report is given as Annexure-I .
(v)	The project proponent shall identify the degraded area within the mine lease and undertake plantation/afforestation in the area identified by planting the native species.	The mine lease area is a riverbed. Hence, we approach the villagers and assist them in planting the native species as well as fruit plants in the villages. Some of the native species are Pipal, Ber, Jamun, Alostromia, Palash, Karanj, Kadamb etc.
(vi)	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out of haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	It is being complied. Water spraying is done on the transportation roads on regular basis. The ambient air quality is regularly monitored and analyses by own as well as by NABL and JSPCB recognized lab and conform to the prescribed standards. Reports are enclosed as Annexure-I .
(vii)	The project proponent shall undertake adequate safeguard measures during extraction of river bed material and	The extraction of sand is done with utmost care of the environment. There is no extraction of water as well as no change in

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	<p>ensure that due to this activity the hydrogeological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area by establishing a network of existing well and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.</p>	<p>river course involved hence there will be no impact on the hydrogeological regime. The monitoring report of the ground water level and quality is given as Annexure-I.</p>
(viii)	<p>The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite of water (surface water and groundwater), if any, required for the project.</p>	<p>No water is required for the operation of project. Drinking water required by the workers is arranged by the company.</p>
(ix)	<p>Appropriate mitigative measures shall be taken to prevent pollution of the river in consultation with the State Pollution Control Board. It shall be ensured that there is no leakage of oil and grease in the river from the vehicles used for transportation.</p>	<p>Adequate monitoring of the health of the vehicles used for transportation of sand is ensured to avoid any oil & grease leakage. Higher capacity trucks have been deployed. Without valid fitness certificates and PUC, the vehicles are not allowed to ply, and it is regularly checked.</p>

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

(x)	Vehicular emissions shall be kept under control and regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	The vehicles used are regularly checked and maintained. Only vehicles having PUC certificates are allowed. Transportation of sand is always done via tarpaulin-covered trucks which are optimally loaded. This is monitored whenever vehicles enter premises at weighbridge
(xi)	No drilling and blasting operation shall be carried out.	Not applicable as it is a sand mining project.
(xii)	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. Sand stored in the sand yards is transferred to underground voids through surface bunkers in a slurry form. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.
(xiii)	Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	As per our policy, PME's (Periodical Medical Examination) are conducted at regular intervals.
(xiv)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The workers are from the neighboring villages and hence new housing facilities are not required.
(xv)	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO,	The monitoring of the air parameters has been done in this period. There is no use of water for mining operation hence there is no discharge. Details of air quality monitoring are given in Annexure-I . The monitoring reports are regularly uploaded on company's

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	PH, Fecal Coliform and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	website along with half-yearly EC compliance reports.
(xvi)	The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.	<p>The Company already has an Environment Policy approved by the Managing Director and it addresses all the issues mentioned.</p> <p>The status of adherence to the policy and compliance to Environmental laws and regulations is regularly discussed at higher levels. Any non-compliance noticed is corrected at divisional level. If any issue is beyond our control, it is brought to the notice of higher management. The environment management cell directly reports to General Manager and it is reviewed on weekly basis. We have an online system to monitor the statutory requirements and compliance in time. This is reviewed by Board of Directors at company's level.</p>

B.	GENERAL CONDITIONS	
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.	It is being complied with.
(ii)	No change in the calendar plan including excavation, quantum of sand	It is being complied with.

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	from river bed and waste should be made.	
(iii)	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.	No rare species are found in the area.
(iv)	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	The monitoring stations have been established and monitoring jobs are being performed regularly. The ambient air quality analysis reports are attached as Annexure-I .
(v)	Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM10) and NOx] should be regularly submitted to the Ministry including its regional office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months.	It is being submitted as Annexure-I in this compliance report.
(vi)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Sand, being coarse in nature and having high moisture content, does not get air borne during gathering & transportation. However, dust control measures while transporting of sand is in place through water tanker, coverage of trucks and optimal loading.
(vii)	Measures should be taken for control of noise levels below 85 dBA in work Environment. Workers engaged in	Proper PPE's are provided to all the workers.

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	operations of HEMM, etc. should be provided with ear plugs / muffs.	
(viii)	Industrial waste water (Workshop and Waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and Grease trap should be installed before discharge of Workshop effluents.	No waste water generation will take place.
(ix)	Personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational Health Surveillance programme of the worker should be undertaken periodically to observe any contraction due to exposure to dust and take corrective measures, if needed.	It is being complied during operating hours.
(x)	A separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a senior executive, who will report directly to the Head of the Organization.	We have a separate Environmental Management Cell with qualified personnel's. The reporting of Environmental Cell is directly to General Manager of the Division.
(xi)	The funds earmarked for environmental protection measures should be kept in separate A/C and should not be diverted for other purposes. Year wise expenditure should be reported to this ministry and its regional office located at Bhubaneswar.	Expenditure on Environmental Protection measures is monitored separately. It is provided in the Environment Statement every year. The annual expenditure for the financial year 2022-23 is Rs. 0.39 lakhs for water spraying activities on transport road, plantation and environment monitoring.
(xii)	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities	The CTE and CTO of the project have been granted by JSPCB. The permission for lifting of sand from the river bed has also been granted by District Mining Officer, Bokaro.

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	and the date of start of land development work.	
(xiii)	The regional office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer (s) of the regional office by furnishing the requisite Data/information/ monitoring reports.	It will be complied with.
(xiv)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environment clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the MoEF, its Regional Office Bhubaneswar, the respective zonal office of CPCB and the SPCB. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, Bhubaneswar, the respective Zonal Officer of CPCB and the SPCB.	It is being complied with. We are uploading the compliance of October 2023-March 2024 HY Compliance on PARIVESH Portal.
(xv)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	It has been complied with.
(xvi)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District	The copy of clearance letter has been sent to JSPCB office and its compliance report is also submitted to JSPCB.

Compliance status of Environmental Clearance of Lagla and Mahal Sand Lease Mining project of M/s Tata Steel Ltd., Village Lagla and Mahal, dist. Bokaro, Jharkhand vide MoEFCC Letter no J-11015/426/2008-IA.II (M) dated February 27, 2013

	Industry Centre and the Collector's Office / Tehsildar's Office for 30 days.	
(xvii)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also be sent to the respective Regional Office of the Ministry on Environment and Forests, Bhubaneswar by e-mail.	The environmental statement for financial year 2022-23 has been submitted to JSPCB on 29 th September 2023 vide letter no. JMB/ENV/ESSA/05/730/2023 and it is also uploaded on the company website. The soft copy of Environment Statement is also sent to MOEF by email at ro.ranchi-mef@gov.in.
(xviii)	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.	It has been complied with.

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)**Ambient Air Quality Analysis Report****Period-** October'23 to December'23

Name of Industry : Lagla Mahal Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	October'23	November'23	December'23
Mahal School Near Izri River	18.10.2023/ Clear	23.11.2023/ Clear	14.12.2023/ Clear
Lagla Gram Panchayat	18.10.2023/ Clear	23.11.2023/ Clear	14.12.2023/ Clear
Bagula School	19.10.2023/ Clear	24.11.2023/ Clear	15.12.2023/ Clear
Shahar Juri School	19.10.2023/ Clear	24.11.2023/ Clear	15.12.2023/ Clear

Location	Latitude/ Longitude	Date	PM ₁₀	PM _{2.5}	SO ₂	NOx
			PM ₁₀ Level : 24 Hourly Limit- 100µg/m ³	PM _{2.5} Level : 24 Hourly Limit-60µg/m ³	SO _x Level: 24 Hourly Limit- 80µg/m ³	NO _x Level: 24 Hourly Limit- 80µg/m ³
Mahal School Near Izri River	23°38'06.1"N / 86°23'41.2" E	18.10.2023	66.2	40.5	14.6	24.2
		23.11.2023	65.3	39.2	13.2	23.4
		14.12.2023	63.5	37.4	12.3	21.6
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	18.10.2023	67.4	40.7	14.2	24.3
		23.11.2023	65.7	38.5	12.8	23.2
		14.12.2023	64.2	36.4	12.2	20.6
Bagula School	23°36'27.3" N/ 86°21'59.7" E	19.10.2023	74.3	43.2	16.8	21.5
		24.11.2023	73.5	41.4	14.7	20.6
		15.12.2023	68.6	38.7	13.2	18.7
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	19.10.2023	73.7	43.6	15.4	22.2
		24.11.2023	72.3	41.5	13.7	20.8
		15.12.2023	69.5	39.3	12.5	18.2
Minimum			63.5	36.4	12.2	18.2
Maximum			74.3	43.6	16.8	24.3
Average			68.68	40.03	13.80	21.60


Area Manager (Environment)

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)**Ambient Air Quality Analysis Report****Period-** January'24 to March'24

Name of Industry : Lagla Mahal Sand Mining Project

No. of sampling points : 4

Sampling Location	Date of Sampling/ Weather Condition		
	January'24	February'24	March'24
Mahal School Near Izri River	18.01.2024/ Clear	15.02.2024/ Clear	21.03.2024/ Cloudy
Lagla Gram Panchayat	18.01.2024/ Clear	15.02.2024/ Clear	21.03.2024/ Cloudy
Bagula School	19.01.2024/ Clear	16.02.2024/ Clear	22.03.2024/ Clear
Shahar Juri School	19.01.2024/ Clear	16.02.2024/ Clear	22.03.2024/ Clear

Location	Latitude/ Longitude	Date	PM ₁₀	PM _{2.5}	SO ₂	NOx
			PM ₁₀ Level: 24 Hourly Limit-100µg/m ³	PM _{2.5} Level: 24 Hourly Limit- 60µg/m ³	SOx Level: 24 Hourly Limit- 80µg/m ³	NOx Level: 24 Hourly Limit- 80µg/m ³
Mahal School Near Izri River	23°38'06.1"N / 86°23'41.2" E	18.01.2024	63.2	36.7	15.2	24.5
		15.02.2024	62.5	35.6	14.7	23.8
		21.03.2024	60.6	31.3	13.2	20.4
Lagla Gram Panchayat	23°37'21.3" N/ 86°23'35.3" E	18.01.2024	63.2	35.6	14.8	25.8
		15.02.2024	62.4	34.3	14.3	24.2
		21.03.2024	61.3	31.5	12.7	21.7
Bagula School	23°36'27.3" N/ 86°21'59.7" E	19.01.2024	65.4	36.3	16.8	24.3
		16.02.2024	64.2	34.8	15.2	23.8
		22.03.2024	61.5	32.4	13.5	19.6
Shahar Juri School	23°36'26.6" N/ 86°20'58.9" E	19.01.2024	64.6	36.2	15.7	23.2
		16.02.2024	63.7	35.3	14.5	22.4
		22.03.2024	61.2	32.5	12.6	18.7
Minimum			60.6	31.3	12.6	18.7
Maximum			64.6	36.7	16.8	25.8
Average			62.81	34.37	14.43	22.70


Area Manager (Environment)

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)**Ground Water Quality Analysis****Ground water level fluctuation in and around Core & Buffer zone area of sand mining lease
Post- Monsoon Season- November'23**

S.No	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	15.11.2023	Premsinghdih	10:40AM	2.18	7.3	615
2	15.11.2023	Lagla	11:45AM	2.10	7.2	495
3	15.11.2023	Alakdih	11:10AM	1.48	7.1	510
4	15.11.2023	Joradih	12:48PM	2.10	7.2	570
5	15.11.2023	SEB Quarters	11:45AM	2.12	7.3	652
6	15.11.2023	Kargali	02:55PM	2.20	7.2	487
7	15.11.2023	Kumargora	01:15PM	1.42	7.1	589
8	15.11.2023	Bhojudih	01:35PM	1.32	7.2	578
9	15.11.2023	Mahal	12:15PM	1.48	7.1	524
10	15.11.2023	Sudamdih	02:10 PM	1.60	7.2	595

Winter Season- January'24

S.No	Date	Location	Time	Sample Parameter		
				Depth in meter (m)	pH	Electrical Conductivity, $\mu\text{S/m}$
1	24.01.2024	Premsinghdih	10:15AM	2.45	7.2	605
2	24.01.2024	Lagla	11:42AM	2.40	7.1	510
3	24.01.2024	Alakdih	10:58AM	2.15	7.2	524
4	24.01.2024	Joradih	01:50PM	2.52	7.2	579
5	24.01.2024	SEB Quarters	11:22AM	2.58	7.0	675
6	24.01.2024	Kargali	01:55PM	2.58	7.2	512
7	24.01.2024	Kumargora	11:40PM	1.83	7.1	615
8	24.01.2024	Bhojudih	12:58PM	1.75	7.2	603
9	24.01.2024	Mahal	12:18PM	1.86	7.1	542
10	24.01.2024	Sudamdih	12:12PM	2.04	7.2	598


Area Manager (Environment)

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

Surface Water Quality Analysis


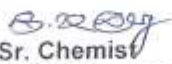


Sl. No.	Location	Sampling Date	Sampling Time	Temp	pH	TSS	BOD	Oil & Grease
				< 40°C	5.5 - 9.0	100 mg/l	30 mg/l	10 mg/l
1.	River Gowai Up Sttream	29.03.2024	10:34AM	27.5	7.8	24	2.1	0.7
2.	River Damodar Down Stream	29.03.2024	10:55AM	27.6	7.7	23	2.2	0.6
3.	Lagla (Pond)	29.03.2024	01:38 PM	26.8	7.5	23	2.4	0.4
4.	Alakhdihi(Pond)	29.03.2024	01:42 PM	27.5	7.6	22	2.6	0.3
5.	Joradihi (Pond)	29.03.2024	11:45 AM	26.7	7.6	23	2.8	0.2
6.	SEB Quarters (Pond)	29.03.2024	11:12 AM	28.4	7.5	22	2.7	0.1
7.	Kargali (Pond)	29.03.2024	12:35AM	27.5	7.4	24	2.3	0.1
8.	Kumargora (Pond)	29.03.2024	12:50 PM	26.8	7.5	23	2.6	0.2
9.	Bhojudih (Pond)	29.03.2024	12:40 PM	27.4	7.3	22	2.5	0.1




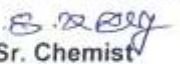


Area Manager (Environment)

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)


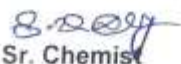


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	ADITI R&D SERVICES Testing Laboratory NABL ACCREDITED (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriadi@gmail.com Website: aditirnds.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608		
Ref. No.: - ARDS/23-24/1436		Date: 18.11.2023		
TEST REPORT OF AMBIENT AIR QUALITY				
<ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. – DHANBA D (JHARKHAND) • Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021 • Date of Sample Collection : 13/11/2023 – 14/11/2023 • Date of Testing : 15/11/2023 – 16/11/2023 • Test Procedure : As per IS-5182 				
TEST RESULTS				
LOCATION – ICCHAR HIGH SCHOOL				
	Avg. Ambient Temperature	30°C	Avg. Humidity	40%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	68.90	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	42.34	60 µg/m ³	
3.	SO ₂ , µg/m ³	15.64	80 µg/m ³	
4.	NO ₂ , µg/m ³	25.32	80 µg/m ³	
5.	Ozone, µg/m ³	14.22	180 µg/m ³	
6.	NH ₃ , µg/m ³	18.52	400 µg/m ³	
7.	CO, mg/m ³	0.44	4 mg/m ³	
8.	Pb, µg/m ³	BDL	1 µg/m ³	
9.	As, ng/m ³	BDL	6 ng/m ³	
10.	Ni, ng/m ³	BDL	20 ng/m ³	
11.	Benzene, µg/m ³	BDL	5 µg/m ³	
12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	
NOTE: BDL - Below Detection Limit				
 Sr. Chemist Aditi R&D Services			 Technical Manager Aditi R&D Services, Sindri	
Statements : 1. The test report refers only to the particular item(s) submitted for testing. 2. The test results reported in this report are valid at the time of and under the stated condition of measurement. 3. This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.				





Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditimdsservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608																																																																											
<div style="display: flex; justify-content: space-between;"> Ref. No.: - ARDS/23-24/1437 Date: 18.11.2023 </div> <h3 style="text-align: center; margin: 10px 0;">TEST REPORT OF AMBIENT AIR QUALITY</h3> <ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) • Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021 • Date of Sample Collection : 13/11/2023 – 14/11/2023 • Date of Testing : 15/11/2023 – 16/11/2023 • Test Procedure : As per IS-5182 <h4 style="text-align: center; margin: 10px 0;">TEST RESULTS</h4> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="5">LOCATION – LAGLA GRAM PANCHYAT</th> </tr> <tr> <th></th> <th>Avg. Ambient Temperature</th> <th>30°C</th> <th>Avg. Humidity</th> <th>40%</th> </tr> <tr> <th>Sl No.</th> <th>Particulars</th> <th>Value</th> <th colspan="2">CPCB STANDARD</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Particulate Matter (PM₁₀), µg/m³</td> <td>69.10</td> <td colspan="2">100 µg/m³</td> </tr> <tr> <td>2.</td> <td>Particulate Matter (PM_{2.5}), µg/m³</td> <td>40.46</td> <td colspan="2">60 µg/m³</td> </tr> <tr> <td>3.</td> <td>SO₂, µg/m³</td> <td>13.25</td> <td colspan="2">80 µg/m³</td> </tr> <tr> <td>4.</td> <td>NO₂, µg/m³</td> <td>28.40</td> <td colspan="2">80 µg/m³</td> </tr> <tr> <td>5.</td> <td>Ozone, µg/m³</td> <td>15.28</td> <td colspan="2">180 µg/m³</td> </tr> <tr> <td>6.</td> <td>NH₃, µg/m³</td> <td>19.46</td> <td colspan="2">400 µg/m³</td> </tr> <tr> <td>7.</td> <td>CO, mg/m³</td> <td>0.60</td> <td colspan="2">4 mg/m³</td> </tr> <tr> <td>8.</td> <td>Pb, µg/m³</td> <td>BDL</td> <td colspan="2">1 µg/m³</td> </tr> <tr> <td>9.</td> <td>As, ng/m³</td> <td>BDL</td> <td colspan="2">6 ng/m³</td> </tr> <tr> <td>10.</td> <td>Ni, ng/m³</td> <td>BDL</td> <td colspan="2">20 ng/m³</td> </tr> <tr> <td>11.</td> <td>Benzene, µg/m³</td> <td>BDL</td> <td colspan="2">5 µg/m³</td> </tr> <tr> <td>12.</td> <td>Benzoapyrene ng/m³</td> <td>BDL</td> <td colspan="2">1 ng/m³</td> </tr> </tbody> </table> <p style="margin-top: 5px;">NOTE: BDL - Below Detection Limit</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">  Sr. Chemist Aditi R&D Services </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  Technical Manager Aditi R&D Services, Sindri </div> </div>			LOCATION – LAGLA GRAM PANCHYAT						Avg. Ambient Temperature	30°C	Avg. Humidity	40%	Sl No.	Particulars	Value	CPCB STANDARD		1.	Particulate Matter (PM ₁₀), µg/m ³	69.10	100 µg/m ³		2.	Particulate Matter (PM _{2.5}), µg/m ³	40.46	60 µg/m ³		3.	SO ₂ , µg/m ³	13.25	80 µg/m ³		4.	NO ₂ , µg/m ³	28.40	80 µg/m ³		5.	Ozone, µg/m ³	15.28	180 µg/m ³		6.	NH ₃ , µg/m ³	19.46	400 µg/m ³		7.	CO, mg/m ³	0.60	4 mg/m ³		8.	Pb, µg/m ³	BDL	1 µg/m ³		9.	As, ng/m ³	BDL	6 ng/m ³		10.	Ni, ng/m ³	BDL	20 ng/m ³		11.	Benzene, µg/m ³	BDL	5 µg/m ³		12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	
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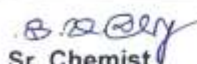


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	<p>Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 826107 Email ID: sindriaditi@gmail.com Website: aditirnds-services.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512808</p>		
Ref. No.: - ARDS/23-24/1438		Date: 18.11.2023		
TEST REPORT OF AMBIENT AIR QUALITY				
<ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) • Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021 • Date of Sample Collection : 13/11/2023 to 14/11/2023 • Date of Testing : 15/11/2023 – 16/11/2023 • Test Procedure : As per IS-5182 				
TEST RESULTS				
LOCATION – SAHARJURI SCHOOL				
	Avg. Ambient Temperature	30°C	Avg. Humidity	40%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	78.45	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	46.12	60 µg/m ³	
3.	SO ₂ , µg/m ³	14.36	80 µg/m ³	
4.	NO ₂ , µg/m ³	26.42	80 µg/m ³	
5.	Ozone, µg/m ³	16.65	180 µg/m ³	
6.	NH ₃ , µg/m ³	15.32	400 µg/m ³	
7.	CO, mg/m ³	0.64	4 mg/m ³	
8.	Pb, µg/m ³	BDL	1 µg/m ³	
9.	As, ng/m ³	BDL	6 ng/m ³	
10.	Ni, ng/m ³	BDL	20 ng/m ³	
11.	Benzene, µg/m ³	BDL	5 µg/m ³	
12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	
NOTE: BDL - Below Detection Limit				
 Sr. Chemist Aditi R&D Services			 Technical Manager Aditi R&D Services, Sindri	
Statements : 1. The test report refers only to the particular item(s) submitted for testing. 2. The test results reported in this report are valid at the time of and under the stated condition of measurement. 3. This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.				


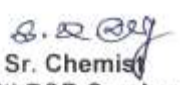


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	<p>Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608</p>		
Ref. No.: - ARDS/23-24/1439		Date: 18.11.2023		
TEST REPORT OF AMBIENT AIR QUALITY				
<ul style="list-style-type: none"> • Name of the industry • Work Order Ref. NO.: • Date of Sample Collection • Date of Testing • Test Procedure 	<ul style="list-style-type: none"> : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) : 4700092573/932 Dt. 20.07.2021 : 13/11/2023 to 14/11/2023 : 15/11/2023 – 16/11/2023 : As per IS-5182 			
TEST RESULTS				
LOCATION – RAILWAY COLONY, BHOJUDIH				
	Avg. Ambient Temperature	30°C	Avg. Humidity	40%
Sl No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	80.92	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	49.55	60 µg/m ³	
3.	SO ₂ , µg/m ³	15.25	80 µg/m ³	
4.	NO ₂ , µg/m ³	28.48	80 µg/m ³	
5.	Ozone, µg/m ³	15.30	180 µg/m ³	
6.	NH ₃ , µg/m ³	18.40	400 µg/m ³	
7.	CO, mg/m ³	0.32	4 mg/m ³	
8.	Pb, µg/m ³	BDL	1 µg/m ³	
9.	As, µg/m ³	BDL	6 µg/m ³	
10.	Ni, µg/m ³	BDL	20 µg/m ³	
11.	Benzene, µg/m ³	BDL	5 µg/m ³	
12.	Benzoapyrene µg/m ³	BDL	1 µg/m ³	
NOTE: BDL - Below Detection Limit				
 Sr. Chemist Aditi R&D Services			 Technical Manager Aditi R&D Services, Sindri	
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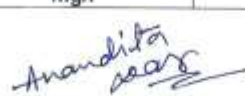


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

		ADITI R&D SERVICES Testing Laboratory NABL ACCREDITED (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified		Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608					
TEST REPORT OF NOISE (AMBIENT) LEVEL MONITORING									
Ref. No. & Date		NAME AND ADDRESS OF THE CLIENT							
ARDS/23-24/1440 Date: 18.11.2023		TATA STEEL JHARIA DIVISION							
Date of Monitoring		TATA STEEL COLLIERY							
13/11/2023 – 14/11/2023		(SAND LEASE AREA, BHOJUDIH)							
Work Order 4700092573/932 Dt. 20.07.2021		Avg. Ambient Temperature (°C)		Average Humidity (%)					
		30		40					
		Clear		Not in operational					
MONITORING RESULTS									
Sl. No	Place of Monitoring	Day Time (6 AM to 10 PM) Avg. dB(A)		Night Time (10 PM to 6 AM) Avg. dB(A)		Noise level (Ambient standard) for Industrial Area as per CPCB Noise Pollution (Regulation and Control) (Amendment) Rules, 2000 notified vide S.O. 1046(E) Dt. 22.11.2020 Limit in dB(A) Leq			
LOCATION		MAX	MIN	MAX	MIN				
SAND LEASE AREA						Day Time	Night Time		
				AVG. dB(A) Leq			Residential Area	Residential Area	
1.	Saharjuri School	59	43	56.1	42	35	39.78	65.00	55.00
2.	Lagla Gram Panchyat	53	41	50.26	36	32	34.45		
3.	Icchar High School	52	42	49.40	44	38	41.96		
4.	Railway Colony Bhojidihi	54	40	51.16	41	33	38.63		
 Sr. Chemist Aditi R&D Services				 Technical Manager Aditi R&D Services, Sindri					
Statements : 1. The test report refers only to the particular item(s) submitted for testing. 2. The test results reported in this report are valid at the time of and under the stated condition of measurement. 3. This particular test report cannot be reproduced except in full, without prior written permission of Quality Manager of the laboratory.									


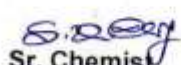


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	ADITI R&D SERVICES Testing Laboratory NABL ACCREDITED (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditimdsservices.com Phone: 0326-2952377 (O), Fax: 0326-2952377 Mobile: 09471358492, 09431512608																						
Ref. No.: - ARDS/23-24/1441		Date: 18.11.2023																						
<u>TEST REPORT OF MINERALOGICAL COMPOSITION</u> <u>OF PARTICULATE MATTER</u>																								
<ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) • Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021 • Date of Sample Collection : 14/11/2023 • Date of Testing : 15/11/2023 to 16/11/2023 																								
<u>TEST RESULTS</u>																								
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Sl No.</th> <th rowspan="2">Particulars</th> <th colspan="4">Mineralogical Composition (%)</th> </tr> <tr> <th>SiO₂</th> <th>FeO</th> <th>Al₂O₃</th> <th>CaO</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Lagla Gram Panchyat</td> <td>1.89</td> <td>0.09</td> <td>1.18</td> <td>2.6</td> </tr> <tr> <td>2.</td> <td>Saharjuri School</td> <td>1.8</td> <td>0.16</td> <td>1.38</td> <td>2.84</td> </tr> </tbody> </table>			Sl No.	Particulars	Mineralogical Composition (%)				SiO ₂	FeO	Al ₂ O ₃	CaO	1.	Lagla Gram Panchyat	1.89	0.09	1.18	2.6	2.	Saharjuri School	1.8	0.16	1.38	2.84
Sl No.	Particulars	Mineralogical Composition (%)																						
		SiO ₂	FeO	Al ₂ O ₃	CaO																			
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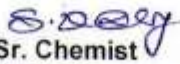


Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	ADITI R&D SERVICES Testing Laboratory NABL ACCREDITED (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O. - Domgarh, Dist. - Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O). Fax: 0326-2952377 Mobile: 09471358492, 09431512608					
Ref. No.: - ARDS/23-24/1442		Date: 18.11.2023					
TEST REPORT OF SURFACE WATER							
<ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) • Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021 • Sample Code : <ul style="list-style-type: none"> 1. Izri River (Up Stream) 2. Izri River (Dn. Stream) 3. Gowai River (Up Stream) 4. Gowai River (Dn. Stream) • Date of Sample Collection : 13/11/2023 • Date of Testing : 15/11/2023 to 18/11/2023 • Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO₄ 							
TEST RESULT							
Sl. No.	PARAMETERS OF TEST	VALUE	Limit as per IS 2296 Class - C	Test Method			
		Izri River (Up Stream)	Izri River (Dn. Stream)	Gowai River (Up Stream)	Gowai River (Dn. Stream)		
1.	pH	7.4	7.5	7.5	7.7	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	221	234	240	247	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	NIL	1	1	1	-	IS-3025 (P-10):1984
4.	Dissolved Oxygen, mg/l	5.7	5.9	6.1	6.3	4.0 (Min)	IS-3025 (P-38):1989
5.	Bio chemical Oxygen Demand, mg/l	1.8	2.0	1.2	1.0	3.0	IS-3025 (P-44):1994
6.	Chloride as Cl, mg/l	18.6	16.7	18.5	22.3	-	IS-3025 (P-32):1988
7.	Fluoride as F, mg/l	0.54	0.50	0.59	0.64	1.5	IS-3025 (P-60):2008
8.	Sulphate as SO ₄ , mg/l	59	49	45	50	400	IS-3025 (P-24):1986
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Sr. Chemist Aditi R&D Services </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  Technical Manager Aditi R&D Services, Sindri </div> </div>							
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Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&D SERVICES</h2> <p style="margin: 0;">Testing Laboratory</p> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0; color: red;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	<p>PLOT No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608</p>																																																																
<p>Ref. No.: - ARDS/23-24/1904 Date: 13.02.2024</p> <p style="text-align: center;"><u>TEST REPORT OF AMBIENT AIR QUALITY</u></p> <p> Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. – DHANBA D (JHARKHAND) </p> <p> Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021 </p> <p> Date of Sample Collection : 07/02/2024 – 08/02/2024 </p> <p> Date of Testing : 09/02/2024 – 12/02/2024 </p> <p> Test Procedure : As per IS-5182 </p> <p style="text-align: center;"><u>TEST RESULTS</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">LOCATION – ICCHAR HIGH SCHOOL</th> </tr> <tr> <th></th> <th style="text-align: center;">Avg. Ambient Temperature</th> <th style="text-align: center;">24°C</th> <th style="text-align: center;">Avg. Humidity</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">38%</td> </tr> <tr> <th style="text-align: center;">Sl No.</th> <th style="text-align: center;">Particulars</th> <th style="text-align: center;">Value</th> <th style="text-align: center;">CPCB STANDARD</th> </tr> <tr> <td style="text-align: center;">1.</td> <td>Particulate Matter (PM₁₀), µg/m³</td> <td style="text-align: center;">66.83</td> <td style="text-align: center;">100 µg/m³</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Particulate Matter (PM_{2.5}), µg/m³</td> <td style="text-align: center;">39.12</td> <td style="text-align: center;">60 µg/m³</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>SO₂, µg/m³</td> <td style="text-align: center;">19.24</td> <td style="text-align: center;">80 µg/m³</td> </tr> <tr> <td style="text-align: center;">4.</td> <td>NO₂, µg/m³</td> <td style="text-align: center;">30.46</td> <td style="text-align: center;">80 µg/m³</td> </tr> <tr> <td style="text-align: center;">5.</td> <td>Ozone, µg/m³</td> <td style="text-align: center;">15.38</td> <td style="text-align: center;">180 µg/m³</td> </tr> <tr> <td style="text-align: center;">6.</td> <td>NH₃, µg/m³</td> <td style="text-align: center;">18.15</td> <td style="text-align: center;">400 µg/m³</td> </tr> <tr> <td style="text-align: center;">7.</td> <td>CO, mg/m³</td> <td style="text-align: center;">0.48</td> <td style="text-align: center;">4 mg/m³</td> </tr> <tr> <td style="text-align: center;">8.</td> <td>Pb, µg/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">1 µg/m³</td> </tr> <tr> <td style="text-align: center;">9.</td> <td>As, ng/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">6 ng/m³</td> </tr> <tr> <td style="text-align: center;">10.</td> <td>Ni, ng/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">20 ng/m³</td> </tr> <tr> <td style="text-align: center;">11.</td> <td>Benzene, µg/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">5 µg/m³</td> </tr> <tr> <td style="text-align: center;">12.</td> <td>Benzoapyrene ng/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">1 ng/m³</td> </tr> </tbody> </table> <p>NOTE: BDL - Below Detection Limit</p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  Sr. Chemist Aditi R&D Services </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  Technical Manager Aditi R&D Services, Sindri </div> </div>			LOCATION – ICCHAR HIGH SCHOOL					Avg. Ambient Temperature	24°C	Avg. Humidity				38%	Sl No.	Particulars	Value	CPCB STANDARD	1.	Particulate Matter (PM ₁₀), µg/m ³	66.83	100 µg/m ³	2.	Particulate Matter (PM _{2.5}), µg/m ³	39.12	60 µg/m ³	3.	SO ₂ , µg/m ³	19.24	80 µg/m ³	4.	NO ₂ , µg/m ³	30.46	80 µg/m ³	5.	Ozone, µg/m ³	15.38	180 µg/m ³	6.	NH ₃ , µg/m ³	18.15	400 µg/m ³	7.	CO, mg/m ³	0.48	4 mg/m ³	8.	Pb, µg/m ³	BDL	1 µg/m ³	9.	As, ng/m ³	BDL	6 ng/m ³	10.	Ni, ng/m ³	BDL	20 ng/m ³	11.	Benzene, µg/m ³	BDL	5 µg/m ³	12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³
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Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)


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Ref. No.: - ARDS/23-24/1905		Date: 13.02.2024		
<u>TEST REPORT OF AMBIENT AIR QUALITY</u>				
Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)				
Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021				
Date of Sample Collection : 07/02/2024 – 08/02/2024				
Date of Testing : 09/02/2024 – 12/02/2024				
Test Procedure : As per IS-5182				
<u>TEST RESULTS</u>				
LOCATION – LAGLA GRAM PANCHYAT				
	Avg. Ambient Temperature	24°C	Avg. Humidity	38%
SI No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	63.37	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	37.05	60 µg/m ³	
3.	SO ₂ , µg/m ³	17.29	80 µg/m ³	
4.	NO ₂ , µg/m ³	30.88	80 µg/m ³	
5.	Ozone, µg/m ³	16.35	180 µg/m ³	
6.	NH ₃ , µg/m ³	18.54	400 µg/m ³	
7.	CO, mg/m ³	0.56	4 mg/m ³	
8.	Pb, µg/m ³	BDL	1 µg/m ³	
9.	As, ng/m ³	BDL	6 ng/m ³	
10.	Ni, ng/m ³	BDL	20 ng/m ³	
11.	Benzene, µg/m ³	BDL	5 µg/m ³	
12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	
NOTE: BDL - Below Detection Limit				
 Sr. Chemist Aditi R&D Services		 Technical Manager Aditi R&D Services, Sindri		
				
Statements :				
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Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	<h2 style="margin: 0;">ADITI R&D SERVICES</h2> <h3 style="margin: 0;">Testing Laboratory</h3> <p style="margin: 0;">NABL ACCREDITED</p> <p style="margin: 0;">(A Constituent Board of Quality Council of India)</p> <p style="margin: 0;">ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified</p>	<p>Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608</p>
Ref. No.: - ARDS/23-24/1906		Date: 13.02.2024
<u>TEST REPORT OF AMBIENT AIR QUALITY</u>		
<ul style="list-style-type: none"> • Name of the industry • Work Order Ref. NO. • Date of Sample Collection • Date of Testing • Test Procedure 	<ul style="list-style-type: none"> : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) : 4700092573/932 Dt. 20.07.2021 : 07/02/2024 – 08/02/2024 : 09/02/2024 – 12/02/2024 : As per IS-5182 	
<u>TEST RESULTS</u>		
LOCATION – SAHARJURI SCHOOL		
	Avg. Ambient Temperature	24°C
		Avg. Humidity
		38%
SI No.	Particulars	Value
		CPCB STANDARD
1.	Particulate Matter (PM ₁₀), µg/m ³	65.24
2.	Particulate Matter (PM _{2.5}), µg/m ³	38.15
3.	SO ₂ , µg/m ³	17.83
4.	NO ₂ , µg/m ³	26.95
5.	Ozone, µg/m ³	17.23
6.	NH ₃ , µg/m ³	15.23
7.	CO, mg/m ³	0.44
8.	Pb, µg/m ³	BDL
9.	As, ng/m ³	BDL
10.	Ni, ng/m ³	BDL
11.	Benzene, µg/m ³	BDL
12.	Benzoapyrene ng/m ³	BDL
		100 µg/m ³
		60 µg/m ³
		80 µg/m ³
		80 µg/m ³
		180 µg/m ³
		400 µg/m ³
		4 mg/m ³
		1 µg/m ³
		6 ng/m ³
		20 ng/m ³
		5 µg/m ³
		1 ng/m ³

NOTE: BDL - Below Detection Limit


Sr. Chemist
Aditi R&D Services




Technical Manager
Aditi R&D Services, Sindri

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Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

**ADITI R&D SERVICES****Testing Laboratory****NABL ACCREDITED****(A Constituent Board of Quality Council of India)****ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified**

Plot No. - I-B-17 (P)
Sindri, Industrial Area,
P.O. - Domgarh, Dist. - Dhanbad
Jharkhand - 828107
Email ID: sindriaditi@gmail.com
Website: aditindservices.com
Phone: 0326-2952377 (O)
Mobile: 09471358492, 09431512608

Ref. No.: - ARDS/23-24/1907

Date: 13.02.2024

TEST REPORT OF AMBIENT AIR QUALITY

- Name of the industry : TATA STEEL JHARIA DIVISION
TATA STEEL COLLIERY
(SAND LEASE AREA, BHOJUDIH)
DIST. - DHANBAD (JHARKHAND)
- Work Order Ref. NO.: : 4700092573/932 Dt. 20.07.2021
- Date of Sample Collection : 07/02/2024 – 08/02/2024
- Date of Testing : 09/02/2024 – 12/02/2024
- Test Procedure : As per IS-5182

TEST RESULTS

LOCATION – RAILWAY COLONY, BHOJUDIH

	Avg. Ambient Temperature	24°C	Avg. Humidity	38%
SI No.	Particulars	Value	CPCB STANDARD	
1.	Particulate Matter (PM ₁₀), µg/m ³	78.12	100 µg/m ³	
2.	Particulate Matter (PM _{2.5}), µg/m ³	44.83	60 µg/m ³	
3.	SO ₂ , µg/m ³	21.44	80 µg/m ³	
4.	NO ₂ , µg/m ³	29.52	80 µg/m ³	
5.	Ozone, µg/m ³	15.64	180 µg/m ³	
6.	NH ₃ , µg/m ³	19.46	400 µg/m ³	
7.	CO, mg/m ³	0.49	4 mg/m ³	
8.	Pb, µg/m ³	BDL	1 µg/m ³	
9.	As, ng/m ³	BDL	6 ng/m ³	
10.	Ni, ng/m ³	BDL	20 ng/m ³	
11.	Benzene, µg/m ³	BDL	5 µg/m ³	
12.	Benzoapyrene ng/m ³	BDL	1 ng/m ³	

NOTE: BDL - Below Detection Limit

S. R. Roy
Sr. Chemist

Aditi R&D Services



[Signature]

Technical Manager
Aditi R&D Services, Sindri

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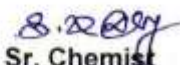


Ref. No. & Date	NAME AND ADDRESS OF THE CLIENT			
ARDS/23-24/1872 Date: 09.02.2024	TATA STEEL JHARIA DIVISION			
Date of Monitoring	TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)			
07/02/2024 – 08/02/2024	Avg. Ambient Temperature (°C)	Average Humidity (%)	Weather Condition	Status of the plant
Work Order 4700092573/932 Dt. 20.07.2021	24	38	Clear	Not in operational

Sl. No	Place of Monitoring	Day Time (6 AM to 10 PM) Avg. dB(A)			Night Time (10 PM to 6 AM) Avg. dB(A)			Noise level (Ambient standard) for Industrial Area as per CPCB Noise Pollution (Regulation and Control) (Amendment) Rules , 2000 notified vide S.O. 1046(E) Dt. 22.11.2020 Limit in dB(A) Leq	
		MAX	MIN	AVG. dB(A) Leq	MAX	MIN	AVERAGE dB(A) Leq	Day Time	Night Time
								Residential Area	Residential Area
1.	Saharjuri School	61	44	58.08	46	35	43.32	65.00	55.00
2.	Lagla Gram Panchyat	53	42	50.32	39	30	36.50		
3.	Ichchar High School	58	40	55.06	43	36	40.78		
4.	Railway Colony Bhojdih	56	45	53.32	44	34	41.40		






Technical Manager
Aditi R&D Services, Sindri

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Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

	ADITI R&D SERVICES Testing Laboratory NABL ACCREDITED (A Constituent Board of Quality Council of India) ISO/IEC 17025:2017, ISO 9001:2015, ISO (OHSAS) 45001:2018 Certified	Plot No. - I-B-17 (P) Sindri, Industrial Area, P.O.- Domgarh, Dist.- Dhanbad Jharkhand - 828107 Email ID: sindriaditi@gmail.com Website: aditirndservices.com Phone: 0326-2952377 (O) Mobile: 09471358492, 09431512608																						
<div style="display: flex; justify-content: space-between;"> Ref. No.: - ARDS/23-24/1902 Date: 12.02.2024 </div> <div style="text-align: center; margin-top: 10px;"> <u>TEST REPORT OF MINERALOGICAL COMPOSITION</u> <u>OF PARTICULATE MATTER</u> </div> <div style="margin-top: 20px;"> <ul style="list-style-type: none"> • Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND) • Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021 • Date of Sample Collection : 08/02/2024 • Date of Testing : 09/02/2024 to 11/02/2024 </div> <div style="text-align: center; margin-top: 10px;"> <u>TEST RESULTS</u> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Sl No.</th> <th rowspan="2">Particulars</th> <th colspan="4">Mineralogical Composition (%)</th> </tr> <tr> <th>SiO₂</th> <th>FeO</th> <th>Al₂O₃</th> <th>CaO</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Icchar High School</td> <td style="text-align: center;">1.62</td> <td style="text-align: center;">0.07</td> <td style="text-align: center;">1.15</td> <td style="text-align: center;">2.4</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Railway Colony Bhojudih</td> <td style="text-align: center;">1.7</td> <td style="text-align: center;">0.12</td> <td style="text-align: center;">1.18</td> <td style="text-align: center;">2.32</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">  Sr. Chemist Aditi R&D Services </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  Technical Manager Aditi R&D Services, Sindri </div> </div>			Sl No.	Particulars	Mineralogical Composition (%)				SiO ₂	FeO	Al ₂ O ₃	CaO	1.	Icchar High School	1.62	0.07	1.15	2.4	2.	Railway Colony Bhojudih	1.7	0.12	1.18	2.32
Sl No.	Particulars	Mineralogical Composition (%)																						
		SiO ₂	FeO	Al ₂ O ₃	CaO																			
1.	Icchar High School	1.62	0.07	1.15	2.4																			
2.	Railway Colony Bhojudih	1.7	0.12	1.18	2.32																			
Statements : <ol style="list-style-type: none"> The test report refers only to the particular item(s) submitted for testing. The test results reported in this report are valid at the time of and under the stated condition of measurement. This particular test report cannot be reproduced except in full without prior permission of Quality Manager of the laboratory. 																								

Ambient Air Quality and Ground Water Quality Report (Period – October'23 to March'24)

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Ref. No.: - ARDS/23-24/1923		Date: 15.02.2024		
<u>TEST REPORT OF SURFACE WATER</u>				
• Name of the industry : TATA STEEL JHARIA DIVISION TATA STEEL COLLIERY (SAND LEASE AREA, BHOJUDIH) DIST. - DHANBAD (JHARKHAND)				
• Work Order Ref. NO. : 4700092573/932 Dt. 20.07.2021				
• Sample Code : <div style="display: flex; flex-direction: column; gap: 5px;"> 1. Gowai River (Up Stream) 2. Gowai River (Dn. Stream) 3. Izri River (Up Stream) 4. Izri River (Dn. Stream) </div>				
• Date of Sample Collection : 08/02/2024				
• Date of Testing : 09/02/2024 to 14/02/2024				
• Test : pH, TDS, Turbidity, DO, BOD, C I, F, SO ₄				
<u>TEST RESULT</u>				
Sl. No.	PARAMETERS OF TEST	VALUE	Limit as per IS	Test Method
		<div style="display: flex; justify-content: space-around;"> <div>Gowai River (Up Stream)</div> <div>Gowai River (Dn. Stream)</div> <div>Izri River (Up Stream)</div> <div>Izri River (Dn. Stream)</div> </div>	2296 Class - C	
1.	pH	7.8 8.0 8.1 8.2	6.5 - 8.5	IS-3025 (P-11): 1983
2.	Total Dissolved Solids, mg/l	320 327 312 319	1500 (Max.)	IS-3025 (P-16): 1984
3.	Turbidity, NTU	1.2 1.4 1.0 1.6	-	IS-3025 (P-10): 1984
4.	Dissolved Oxygen, mg/l	5.5 5.7 6.0 6.4	4.0 (Min)	IS-3025 (P-38): 1989
5.	Bio chemical Oxygen Demand, mg/l	1.5 1.9 2.0 2.3	3.0	IS-3025 (P-44): 1994
6.	Chloride as Cl, mg/l	36.1 34.2 39.88 37.98	600 (Max.)	IS-3025 (P-32): 1988
7.	Fluoride as F, mg/l	0.52 0.56 0.45 0.52	1.5	IS-3025 (P-60): 2008
8.	Sulphate as SO ₄	45.8 40.6 30.6 39.2	400	IS-3025 (P-24): 1986
<div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  Sr. Chemist Aditi R&D Services </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  Technical Manager Aditi R&D Services, Sindri </div> </div>				
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